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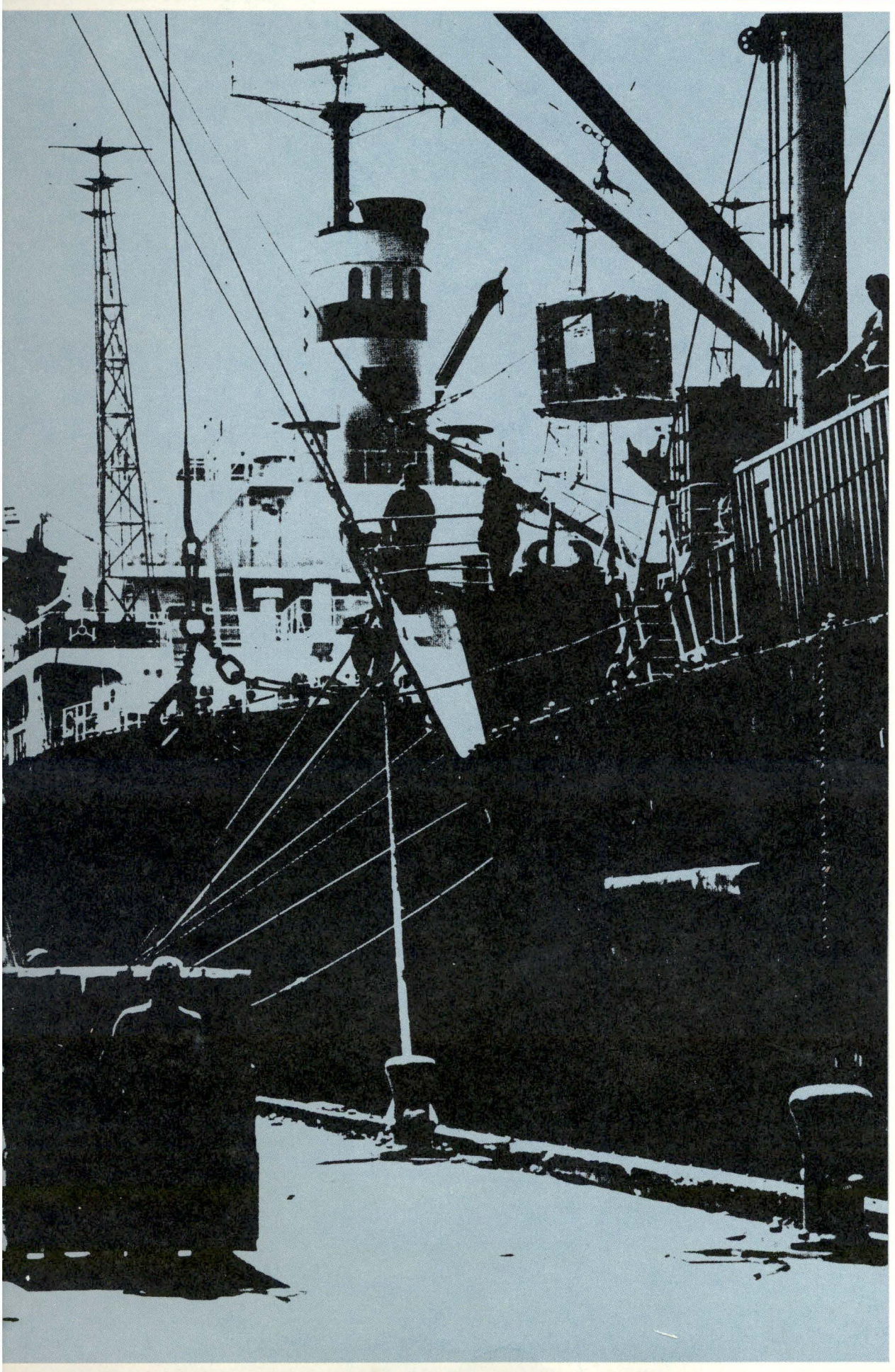
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SPEAKING OF TRADE

# Key Issues for Agriculture





# Why Trade?

J.B. Wyckoff and Harold D. Guither

## INTRODUCTION

With the output from one-third of the harvested acres in the United States moving into international trade, the growing balance of trade deficits, and the positive nature of our agricultural trade, international trade in agricultural products has assumed a major importance not only within agriculture but also within the total U.S. economy. Yet the characteristics, basis, and importance of U.S. agricultural trade are not well known either by agricultural producers or the general public. These six publications are designed to help people understand the following topics:

1. Why Trade?
2. Protection or Free Trade
3. Balance of Payments
4. Commodity Marketing and World Trade
5. International Marketing Alternatives
6. Expanding Trade

This publication introduces the series by explaining the importance of agricultural trade to farmers and people in other segments of the economy. It also briefly introduces the topics to be covered in the other five publications.

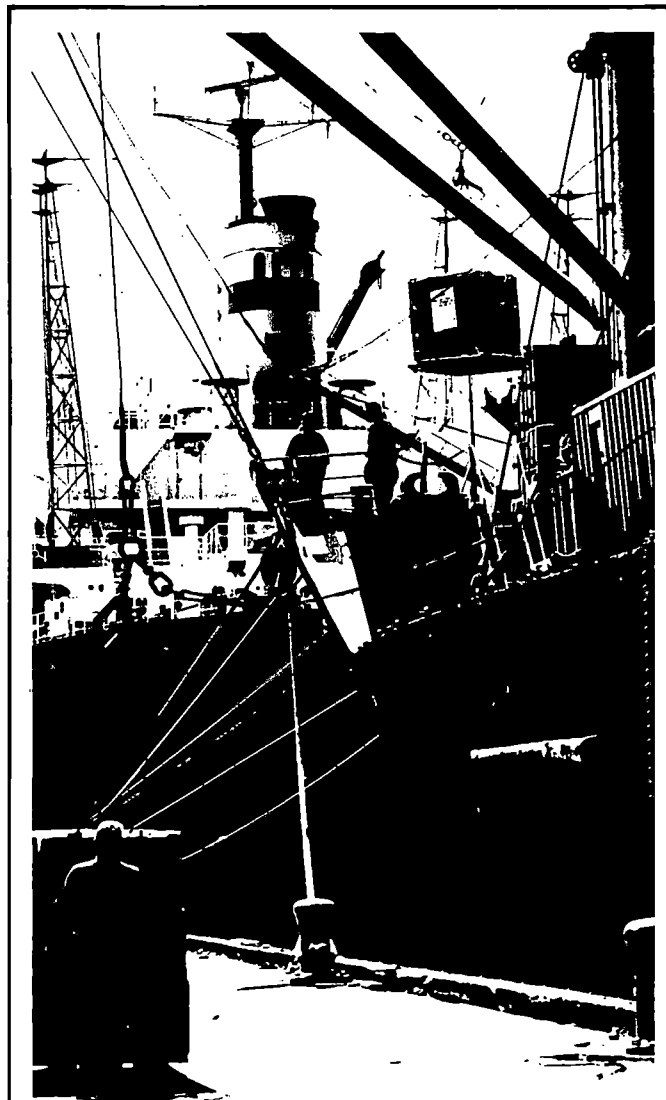
## CHARACTERISTICS OF U.S. AGRICULTURE

U.S. agriculture has the built-in ability to produce enough for the domestic market plus substantial quantities for foreign buyers. While the quantity of total crop land has remained almost constant over time, farmers have increased investments in the land resource in irrigation, drainage, and soil, water, and watershed conservation (figure 1). Farmers also have doubled the per acre quantities of fertilizer nutrients and pesticides used in the last 15 years. Power and machinery use has been increasing while labor has been decreasing (table 1). Because of these shifts in production technology, farm fuel use has increased about 40 percent in the last 10 years and the output

Table 1. Use of selected farm inputs

	1975	1976	1977	1978 <sup>1</sup>
	Percent of 1967			
Total inputs	100	102	103	102
Labor	76	73	71	71
Farm real estate	96	94	97	97
Mechanical power and machinery	113	115	116	117
Agricultural chemicals	127	145	151	150
All other inputs	101	106	107	108

<sup>1</sup> Preliminary.



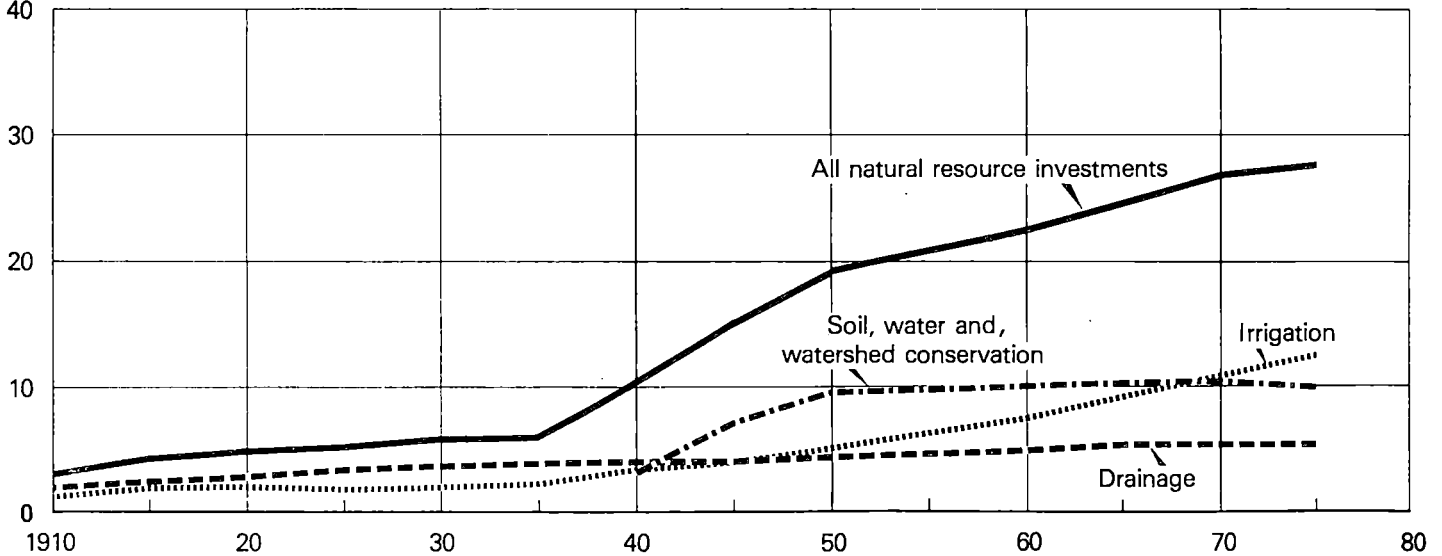
## SPEAKING OF TRADE

per man hour more than 60 percent. Output per acre has been increasing steadily at a rate of about 1.4 percent per year in recent years, and total output

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**Figure 1. Capital Investment in Natural Resources in U.S. Agriculture\***

BIL. DOLLARS (IN 1972 DOLLARS)



\* INCLUDES BOTH PUBLIC AND PRIVATE INVESTMENTS. INVESTMENTS ARE ON A NET OR DEPRECIATING BASIS AS OF THE YEAR SHOWN. DATA PLOTTED ON A 5-YEAR BASIS.

per unit of input has been increasing approximately 1.7 percent per year (figure 2).

**Supply Response to Price Changes**

Usually total U.S. agricultural production changes slowly in response to price changes. A primary reason for this is the high percentage of fixed inputs in the production process, such as land, the farmer's labor, specialized machinery, and buildings, compared to variable inputs such as hired labor, fuel, and fertilizer. An estimated 50 to 80 percent of the total cost of production in agriculture is made up of these fixed elements. Because farmers have very limited opportunity to use the land, labor, and capital for other purposes, the percentage change in the quantity produced is less than the percentage change in the price. Economists call this relationship an "inelastic" supply response. Also, farmers usually increase output faster when prices rise than they cut output when prices fall. When prices rise, farmers respond by making the necessary investments and production changes for increasing output. However, when prices decline, their production capacity is established, and they are reluctant to make adjustments to decrease production. Because of the high ratio of fixed to variable costs, prices can decline dramatically before farmers reduce production, resulting in the high levels of price instability characteristic of many agricultural commodities.

**Demand Response to Price Changes**

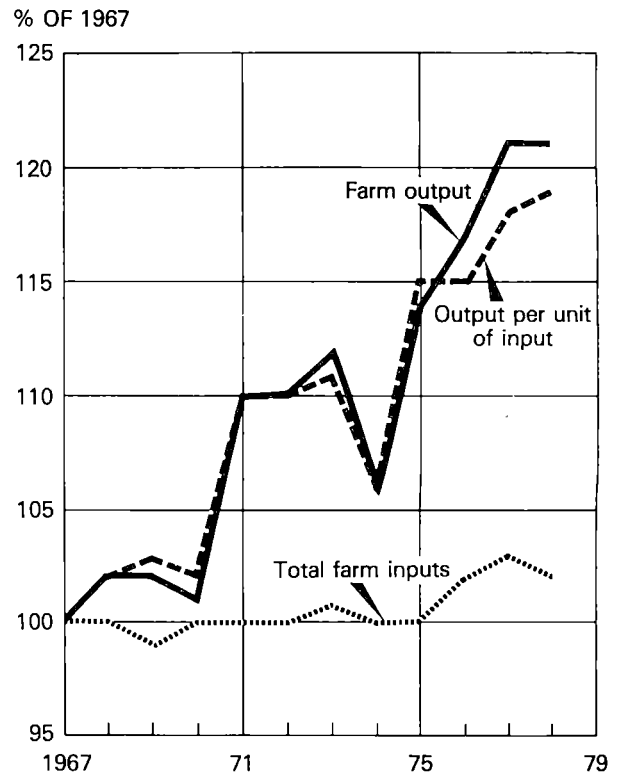
The agricultural products that a farmer sells also have an inelastic demand particularly in the domestic market. As quantities available increase, prices decline relatively more, decreasing the total amount of revenue flowing into the agricultural sector. Similarly, when supplies are short, prices rise relatively more, and total revenue increases rapidly. The interaction of

these demand characteristics with the supply characteristics discussed earlier results in periodic cash income problems for farmers when output increases or markets contract.

**Demand Response to Changes in Income**

The demand for agricultural products also shows an inelastic response to changes in income which dif-

**Figure 2. Farm Productivity**



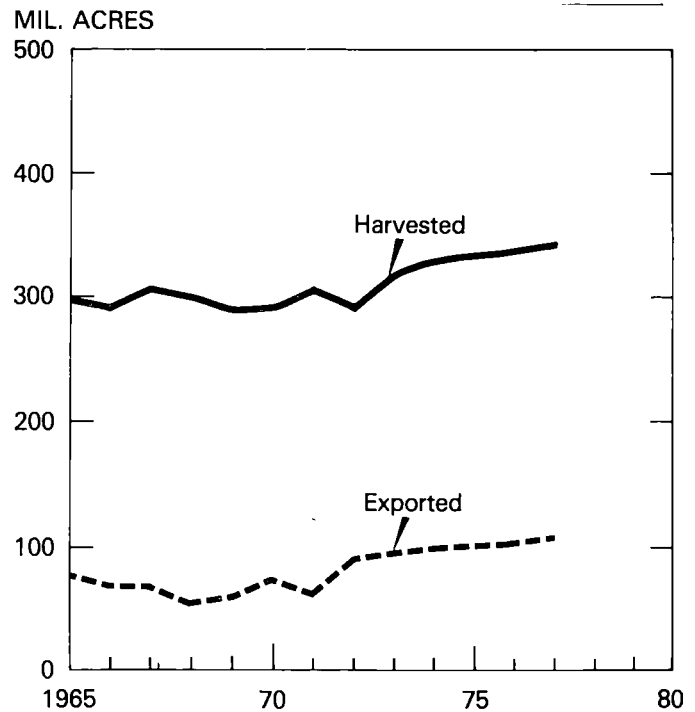
1978 preliminary.

fers by country and by income level within countries. In developed economies usually a 10 percent increase in a consumer's income will result in less than a 2 percent increase in the amount spent for food products. Developing countries generally have a higher elasticity of demand for food, and their consumers may spend more than half of their increased income for food products. This makes them good prospective customers as their economies develop and their incomes increase.

### Importance of Exporting Agricultural Products

Rising incomes in both developed and developing countries have helped U.S. farmers sell more of their production in overseas markets. At the present time, the production from about 1 of every 3 acres is exported (figure 3) and generates about 25 percent of the gross sales presently earned by American farmers. U.S. agriculture has been able to compete in foreign markets because of its high level of production efficiency. This has been attained because of an abundant quantity of top quality land, the availability of industrial inputs (such as machines, power, fertilizer, and chemicals), and the technologically advanced production and management practices developed and extended through agricultural research and education. American farmers have been aggressive in finding ways to combine these assets into lower "real" production costs per unit of output. This has provided the basis for their strong, competitive position in world grain, oilseed, cotton, and other agricultural product markets.

**Figure 3. U.S. Exports from Harvested Acres**



Exported includes feed required to produce livestock products exported.

### U.S. AGRICULTURAL TRADE IN PERSPECTIVE

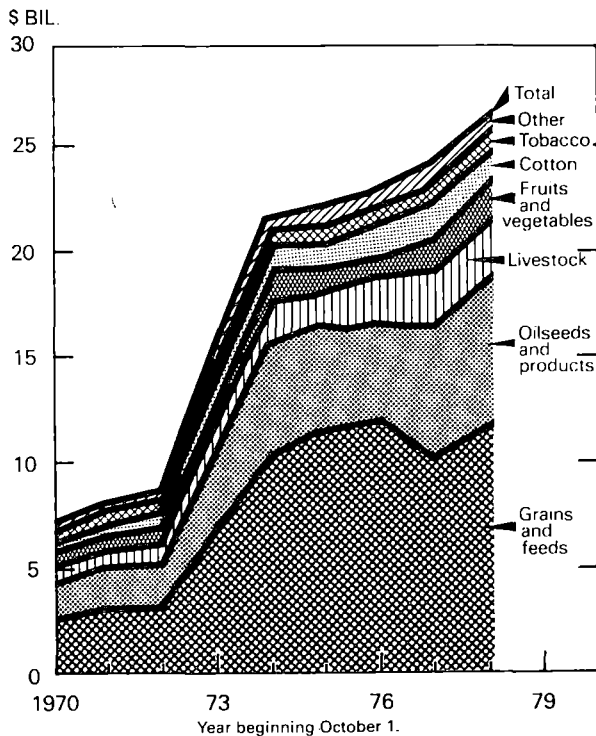
The United States has played a growing and leading role in agricultural trade since World War II. The U.S. annual share of world agricultural exports



rose from about 12 percent in 1951-55 to more than 16 percent in 1971-75. The most significant increase in market share occurred in grains with an increase from 31 percent in 1950-54 to 49 percent of all grain in world trade in 1971-75.

U.S. agricultural exports have risen to higher levels in both quantity and value since 1970. Dollar values rose from \$6.9 billion in the year ending September 1970 to \$27.3 billion in the year ending September 1978, an increase of almost four times. During the same period, quantities of selected agricultural commodities exported rose from 61.6 million to 127.4 million tons, an increase of more than two times.

**Figure 4. U.S. Agricultural Exports by Principal Commodity Groups**



1977/78 Partially estimated.

**U.S. Agricultural Exports by Principal Commodity Groups<sup>1</sup>**

	1975	1976	1977 <sup>2</sup>	1978 <sup>3</sup>
<i>Million dollars</i>				
Total exports	21,854	22,760	24,013	26,600
Grains and feeds	11,561	11,920	9,895	11,400
Oilseeds and products	4,753	4,692	6,404	7,300
Livestock and products	1,666	2,207	2,645	2,800
Fruits, nuts, and vegetables	1,373	1,532	1,742	1,800
Cotton and lint	1,055	919	1,538	1,600
Tobacco, unmanufactured	897	929	1,085	1,100
Other	549	561	537	600

<sup>1</sup> October-September years. <sup>2</sup> Preliminary. <sup>3</sup> Partially estimated.

The most significant upward shifts in agricultural exports occurred in the 1973 and 1974 fiscal years. Values rose from \$8.2 billion in 1972 to \$21.6 billion in 1974. Since that time, the value has edged up more slowly, rising to about \$27 billion in the year ending September 1978 (figure 4).

Grains, feeds, and oilseeds and products make up more than 70 percent of the value of all U.S. agricultural exports. However, livestock and products, cotton, tobacco, and fruits, nuts, and vegetables are also major export commodities with exports averaging from \$1 billion to more than \$2.5 billion annually in recent years.

The value of agricultural exports has risen faster than the total cash receipts from farming. From about 10 percent in 1950, agricultural exports were equal to about 24 percent of cash receipts in 1975 and 1976 and 25 percent in 1977 and 1978.

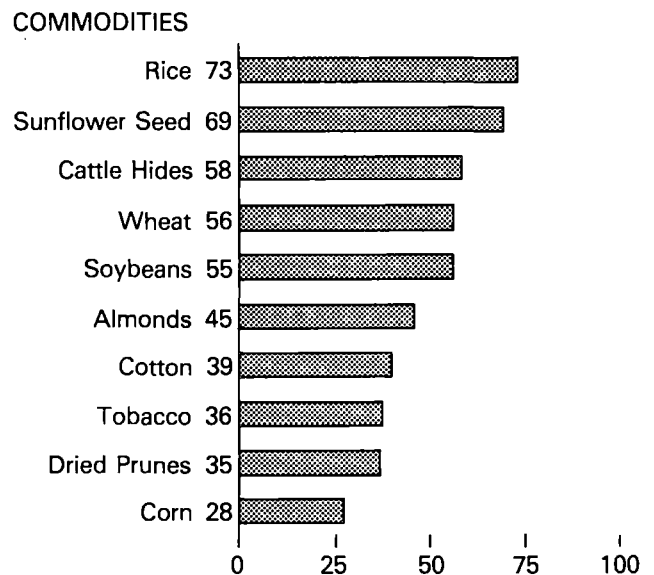
In the year ending September 30, 1978, about 55 percent of the soybeans, 58 percent of the cattle hides, 45 percent of the almonds, 73 percent of the rice, 39 percent of the cotton, 56 percent of the wheat, 39 percent of the tobacco, and 28 percent of the corn produced in this country were exported (figure 5).

Consequently, export demand is a major factor in the level of market prices and the prices received by farmers for the major crops moving into the export market. Reports of drought in major importing countries, crop failures in other major exporting countries, and increased purchases to improve level of diets all affect market prices and the incomes of U.S. producers.

## AGRICULTURAL TRADE BALANCES

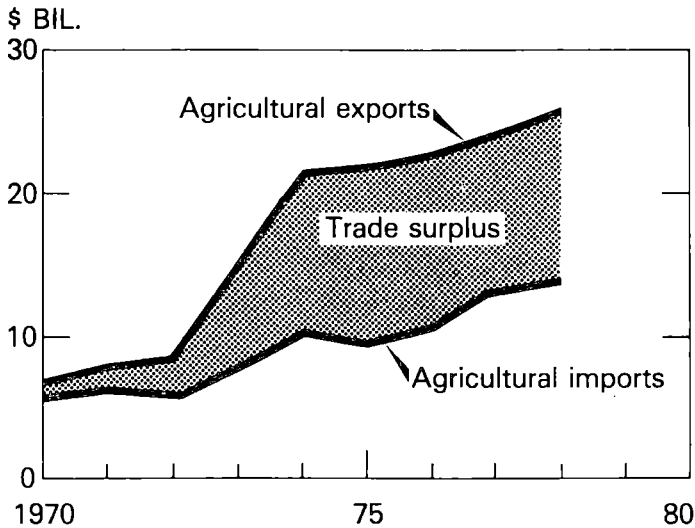
Since 1960, total agricultural exports have exceeded total agricultural imports. The net agricultural trade balance has made a sizable contribution to improving the U.S. balance of trade since 1972. (The

**Figure 5. Percent of U.S. Farm Production Exported**



Year ending September 30, 1978. partially estimated. Soybeans include bean equivalent of meal and oil.

**Figure 6. U.S. Agricultural Trade Balance**



October-September years. 1977/78 partially estimated.

U.S. has had a negative trade balance for nonagricultural goods.) Because of a positive agricultural trade balance, the total U.S. trade balance was positive in the fiscal years ending June 30, 1974 through 1976. Although the net agricultural trade balance declined to about \$10.6 billion in 1976-77, it is estimated to be about \$13.4 billion in the 1977-78 fiscal year (figure 6).

The overall U.S. negative trade balances of 1977 and 1978 have contributed to the declining value of the dollar and rising prices for U.S. imports, both agricultural and nonagricultural. Consequently, a more positive trade balance, made possible by large agricultural exports, could contribute to stability of the dollar and prices of all imported products.

### EFFECTS ON EMPLOYMENT

Agricultural trade affects domestic employment in at least two ways. First, production of agricultural commodities for export requires employment of farm workers directly on farms and ranches, in agribusiness firms that supply various production inputs to farms, and in marketing firms that handle the commodities from the farm to the point of shipment to the foreign countries.

Second, income earned by workers engaged in agricultural production and marketing generates purchasing power that provides employment for those who supply goods and services to these workers.

Employment generators estimated from 1974 USDA employment coefficients, adjusted to 1977 at 1.7 percent annual increase in productivity, indicated that each \$1 billion of 1977 agricultural exports added:

<b>Total employment</b>	<b>51,700 jobs</b>
Farm employment	21,500 jobs
Off-farm employment	30,200 jobs

Thus, the \$27.3 billion of 1978 agricultural exports provided employment for almost 1.4 million U.S. workers.

### Public Costs of Not Trading

Both public and private costs of not trading can be identified, although some measurement problems may be encountered. Public costs involve government expenditures that result when agricultural trade is discontinued or sharply reduced.

Without exports, markets for U.S. agricultural products would shrink and prices fall. Under present farm legislation, government programs to pay farmers to hold land out of production and to store grain could balloon. Costs to taxpayers would soar. On the other hand, if foreign markets are expanded, these costs would diminish.

A growing economy, supported by purchasing power generated in producing and marketing for export, would reduce unemployment and expenditures for public employment programs. Additional Gross National Product generated through foreign trade would result in additional tax revenues that would contribute to a balance of public expenditures with tax revenues. Not understanding the interaction of trade, employment, the balance of payments, the value of the dollar against foreign currencies, and other related issues can lead to poor public decisions. The publications in this series provide the background for improved understanding.

### ISSUES TO BE EXAMINED

#### Protection or Free Trade?

In theory, gains from trade emerge from two sources — specialization in production among nations and access to more favorable world prices for both buyers and sellers. However, these potential gains are not distributed smoothly and some people, industries, and communities may actually suffer reduced income and economic opportunity because of increased trade.

Actually, completely free trade does not exist, because some government intervention is always involved as long as nations have different political philosophies, economic and social objectives, and international problems.

Agriculture and other exporting industries are likely to favor freer trade. Industries that produce goods that are also imported are likely to seek protection to insulate their markets and jobs from international competition. So in formulating international trade policy, how can these forces be balanced with each other and with the broad interests of the general public?

#### Balance of Payments

The balance of payments is a statistical record of all the international transactions, both private and governmental, between the United States and all other nations. Merchandise exports and imports are the principal components of the balance of payments statement. Services, remittances, grants, and capital investments make up the remainder.

When the United States runs a persistent deficit in its balance of payments, confidence in the United States' role in international trade decreases. Persistent deficits require adjustments in the exchange rate or in the trade and national economic policies followed in each country. What policies should the U.S. pursue to achieve a stable dollar?

Since 1973, the United States and other industrial countries that are members of the International Monetary Fund have used a system of floating or market-determined exchange rates. Theoretically, the system of floating exchange rates should permit the United States to secure balance between its exports and imports. But actually the United States has continued to run a deficit trade balance. How can this deficit be managed?

The move to floating exchange rates has been a significant factor in the expansion of agricultural exports since 1973. An undesirable effect is that it has contributed to inflation in the United States. Imported goods cost more, and competition from abroad is reduced thereby allowing domestic producers to raise their prices. Whether to continue using the floating exchange rates system or return to a fixed exchange system needs continued evaluation.

Capital flows required to finance deficits on the current trade account likely will continue. These large foreign investments in stocks, bonds, savings accounts, real estate, industrial plants, and farm land help offset U.S. trade deficits. Should this foreign investment in farm land and other U.S. assets be encouraged or discouraged?

### **Commodity Marketing and World Trade**

Agricultural trade requires a complex system of communication and market services to transfer commodities from a U.S. farm to foreign buyers. This system involves people, institutions, and facilities which assemble, transport, and distribute the commodities traded.

Financing and credit arrangements facilitate trade. Both private and government credit are involved. More liberal credit terms can lead to expanded foreign sales. Is this necessary? Who should do it?

Many complex factors in addition to basic supply and demand forces affect the price of commodities in world trade. Some of these include the structure of markets in both exporting and importing countries, as well as their agricultural policies. What is the relationship between these complex areas? What is the role of international exchange rates? What changes might be made to influence prices and quantities traded?

### **International Marketing Alternatives**

The goals of international marketing include demand expansion, market assurance, raising and stabilizing producer prices, and rationing supplies in periods of shortage. Methods for achieving these goals include the current U.S. system of competitive free enterprise with little centralized control, long-term trade agreements between two traders or governments, international commodity agreements between exporters and importers, international cartels, marketing boards and orders, barter, and export cooperatives.

Which method will best serve the interests of U.S. producers, consumers, businesses, and government? Producers are interested in effects on prices and exports sales. Consumers are interested in food and fiber prices that might result from specific market policies. Businesses are interested in expanding sales and preventing encroachment by government. Government wants to assure supplies, improve the balance of payments, control inflation, and control cost of domestic programs.

The marketing alternatives cover a spectrum from only facilitative government action to considerably more government involvement than currently takes place in U.S. agricultural production and international trade. Two fundamental issues are: (1) how much authority will the public grant agricultural producers to control their export marketing activities and (2) will farmers be willing to transfer individual control over many of their marketing decisions to a group of their representatives?

### **Expanding Trade**

The U.S. farmer has enjoyed a high degree of success in exporting agricultural products in the past, but this does not assure success in the future. Market development programs, guided and partly funded by the Foreign Agricultural Service, have involved a wide range of marketing and promotional activities aimed at potential customers in many foreign countries. Should these efforts be continued, expanded, or reduced?

Bilateral and multilateral trade negotiations make it possible to reduce trade barriers and expand trade. Reciprocal trade agreements and the General Agreements on Tariffs and Trade have helped expand U.S. agricultural trade. However, many tariff and non-tariff barriers still exist. Should such barriers be removed?

Subsidized food aid and concessionary exports have been carried out under Public Law 480. In the past some countries that have received P.L. 480 assistance have become commercial export customers. Should such a program be continued?



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#### Reference Handbook Available:

*Speaking of Trade: Its Effect on Agriculture*, National Public Policy Education Committee Publication Number 6, may be obtained from your state Cooperative Extension Service. Single copies are available for \$1.50 per copy and may be ordered from the Agricultural Extension Service, University of Minnesota, Room 3 Coffey Hall, 1420 Eckles Avenue, St. Paul, Minnesota 55108. Order Special Report No. 72. Prices for quantity orders are available upon request.

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